Thank you for having chosen one of our products for your work. We are certain that it will give the utmost satisfaction and be a notable help on the job.

General Description
Thanks to "All In One" CBI series of DC-UPS, it will be possible to optimize the power management of your system with one single, extremely compact and cost-effective device, connected directly to the mains. The available power is automatically distributed between load and battery giving priority to the load. Battery can supply the load even with mains so the output power to the load can be twice the nominal power if it is required (Power Boost). When mains failure



occurs, the load continues to be supplied by the battery in backup mode. It is also possible to sewich on the device with mains directly from battery. The "Battery Care" algorithm performs rapid and automatic charging, battery charge optimization during time, filst batteries recovery and real time diagnosis during installation and operation. Temperature compensation is possible to comerch the temperature sensor probe. The real time auto-diagnosis system monitors battery faults such as sulfated battery, shorted cells, accidental reverse polarity connection or disconnection of the beatery. Every fault is signated by a bilink code of Diagnosis Led or via Modous (only in some modes) in order to easily detected and removed during the installation and after sales. The continuous monitoring of battery efficiency educes risk of battery damage and allows a safe operation in permanent connection. Peddirectly curves can be selected by jumpers or DPP switch to optimize the charge of different battery types. Open Lead Acid. AGM and Get Lead Acid. Cell are rechargeden in the same device. Charging curves can be cassionized via Modous (only in some models). Output provides IP20 protection degree of the soft and fault conditions. A rugged casing with bracket for DN rail mounting Main Characteristics. Main Characteristics



Universal input voltage: single-phase 115–230-277 Vac
 Load output:24 Vdc 3,5,10,20A; 12 Vdc 3,6,10,15,35A 48 Vdc 5,10A

Battery output: 24 Vdc 3 5 10 20A: 12 Vdc 3 6 10 15 35A: 48 Vdc 5 10A

 Battery output-24 Vcd 5, 5, 10, 204. 12 Vcd 5, 6, 10, 15, 35A, 48 Vcd 5, 10A
 "All In One" Solution: power supply + battery charger + backup module in one single device connected directly to the mains
 Suited for different battery types. Open Lead Acid, Sealed Lead Acid, AGM and Gel Lead Acid, Ni-Cd and Li-lon are available as options. Four stage charging curve for Lead Acid batteries - Statege ILOU (Bulk). Absorption, Float page overy stage for deeply discharged batteries

Automatic diagnosis of battery status and battery Life Test function (Battery Care)

 Switching technology with high efficiency
 Protected against short circuit, overload, and inverted polarity. Output dry contact for signaling Low Battery or Battery Replacement and Fault

 Output dry contact for signaling Mains or Backup . Snace saving on DIN rai

Safety and warning notes WARNING - Explosion Hazard Do not disconnect Equipment unless nower has been switched off or the area is

known to be non-hazardous. WARNING - Explosion Hazard Substitution of components may impair suitability for class I. Division 2

WARNING – Switch off the system before connecting the module. Never work on the machine when it is live. The device must be installed in according with UL508 or UL60950. The device must have a suitable isolating facility outside the power supply unit, via which can be switched to idle. Danger of fatal Injury! Connection (terminal and wiring):

Cable Connection: The following cable cross-sections may be used:

	Solid (mm²)	Stranded (mm²)	AWG	Torque (Nm)	Stripping Length	All In One (Size)	1 Phase L N PE Input AC	1 Phase L N PE Input AC
1	0.2 - 2.5	0.2 - 2.5		0.5 - 0.6 Nm	7 mm	Size 1 and 2		
111.	4.0	6.0	30 - 10	0.8 - 1.0 Nm	7 mm	Size 3 and 4	718 1	7 18 18
0.4	0.2 - 2.5	0.2 – 2.5	24 - 14	0.5 - 0.6 Nm	7 mm	Size 1 and 2	M .	* [*] ·
					7 mm	Size 3 and 4	*" / -+	" / F+
Signal:	0.2 - 2.5	0.2 – 2.5	24 – 14	0.5 – 0.6 Nm	7 mm	All types	/ u	_ <u>~</u>
							ocks. Use only cop	per cables that are

DC BUS Normal connection

Output Load (Mains input ON)
The output Load in normal mode, Mains Input Vac Voltage present, follow the charging battery dc output voltage. The minimum and maximum range stabilized are the following:
CBI 12xxx11 – 14,4 Vdc; 15,5 Vdc for NCcQ (Without battery connected out. Voltage fixed at 12Vdc)

CBI 24xx:22 - 28.8 Vdc; 30 Vdc for NiCd (Without battery connected out. Voltage fixed at 24Vdc) CBI 48xx:44 - 57.6 Vdc; 62 Vdc for NiCd (Without battery connected out, Voltage fixed at 48Vdc)

Thanks to the All in One units, it will be possible to manage the power. The available power is automatically allocated

between load and battery: supplying power to the load is the first priority of the unit; thus it is not necessary to double the power and also the power available for the battery will go to the load if the load requires it. n "Power Boost Mode" the maximum current on the load output is the 2 times the rated current 2 x ln (Iload = In+ batt) in continuous operation and 3 times the rated current 3 x In (Iload = 2In+ lbatt) for 4 seconds: after this

batty in continuous operation and 3 times the rated curriert 3 x in (load ~ 2in- batt) for 4 seconds; after this parameter the devices is electrically protected against overload and short circuit.

In "Power Boost Mode", if the curriert of the battery generate current to he load for a time more than 4 minutes, the device give reassage (\$Elins', consequently means that the battery is discharging, if the Mains of the Output Load, without any interruption.

The Output Load without any interruption.

Voltage does; in this situation the voltage in the output load it is the same of the battery.

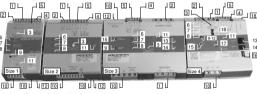
To Avoid deep battery discharge, the battery will supply the load until battery voltage reaches 1.5 Vicell. Below this level the device actionatically switchines of the prevent Develop discharge and battery damage.

Output Load In Buffer Mode (Mains Input OFF)

nle of buffering time depending on LOAD Output in function to the Ah of the battery

Buffering Time	BATT1.2 Ah		BATT7.2 Ah	BATT12 Ah	BATT100 Ah
Load 1.5 A	20 min	60 min	200 min	400 min	/
Load 3 A	8 min	30 min	120 min	240 min	/
Load 5 A	3 min	15 min	55 min	100 min	/
Load 7.5 A	2 min	10 min	30 min	60 min	/
Load 10 A	No	7 min	20 min	45 min	20 h
Load 12 A	No	3 min	12 min	30 min	600 min
Load 15 A	No	No	9 min	20 min	400 min
Load 20 A	No	No	7 min	13 min	240 min

Operating and Display Element:



No. 1: Battery Connection Port

Connect the battery between pin 3 (-) and 4 (+ One battery (12 Vdc) for CBI12xx: Two battery (12 Vdc) connected in Series for CBI24xx; Four battery (12 Vdc) connected in Series for CBI48xx

No. 2: Output Load: (Size 4)

Connect this Output to the load 1 (-). 2 (+). No. 3: Charging Level Current:



In order to protect the battery from excessive charging currents, the device allows you to limit the In order to protect the battery from excessive charging currents, the device allows you to unit the maximum charge current by adjusting the trimmer. It allows you to limit from max in up to 20% of current in. To determine the maximum battery charge current, see the battery manufacturer's Data Sheet, if it is not possible, consider that on average the maximum charge current is 10% of Ah's rated battery current; The data is suitable for both Lead Acid and NiCd batteries.

Output Power connections



DC BUS Parallel connection "Redundancy"

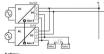
Nº4 battery (12 Vdc) connected in Series for CBI 48xx;

Parallel connection "Redundancy"

Power supplies can be paralleled in case of redundancy concept, to obtain a higher system callability. Redundant systems may support to the parallel from the

Typical application for All In One device, one output for Load "DC Bus", one Input/Output for connection to the battery. N°1 battery (12 Vdc) for CBI 12xx; N°2 battery (12 Vdc) connected in Series for CBI 24xx;

Each unit has two relay: Mains or backup and Low Battery or Battery Replacement (faulty situation). This feature reports a faulty unit; see Relay Contact Rating for any technical detail. c) When possible, connect each power supply to different



BUS Parallel connection "Double Power"

Parallel connection "Double Power"

Power supply can be paralleled to increase the output power, devices can be paralleled to increase the output power, devices can be paralleled to it is obtained to the control of t the system have only One output for the Load and One output for the

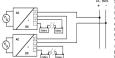
b) Make sure that the two CBI have the same settings: Battery type, Charging level current, Time buffering. Life test... of Automatic configuration, Master-Slave. The devices decide temself Maste and Slave assignment random. The assignment become able every power on, or after the connection of the cable RJ45. Master device give you all the visual sionals. the Slave device maintain diagnosis LED always ON.

d) Use the alarm contacts of both the two devices and deliver them at will.
 e) For Start Battery there are two way, without mains voltage:

e) For Start Battery there are two way, without mains voltage.

- push start button on both units

- connect Cabel "RTCONN" on position 5, to connect pushbotton on a front panel.



DC BUS Series connection:

It is possible to connect as many units in series as needed, providing the sum of the output voltage does not exceed 150Vdc. b) Voltages with a potential above 60Vdc are not SELV any more and can be dangerous. Such voltages must be installed with a protection against cangerous. Such voitages must be instale with a protection against touching. O For serial operation use power supplies of the same type. d) Earthing of the output is required when the sum of the output voitage is above 60Vd.c. (e) Keep an installation clearance of 10 mm (left/right) between two power supplies and avoid installing the power supplies on top of each other. Note: Avoid return voitage (e.g., from a decelerating motor or battery) which is applied to the output

No. 4. 5 Signal Ports (Output Isolated):

Connections for, No. 5: MAINS OR BACKUP: Input Mains On/Off. Contact: 5,6,7 No. 4: LOW BATTERY, BATTERY REPLACEMENT, FAULT BATTERY or FAULT SYSTEM Contact: 8,9,10

Relay Contact Rating: Max.DC1: 30 Vdc 1 A: AC1: 60 Vac 1A : Resistive load (EN 60947-4-1) Min.1mA at 5 Vdc: Min. permissive load

Signal Output port true table:	е		e - Led N°6 Back-Up	Port N°1 - Led N°7 Fault Battery		
		5-6 Closed	5-7 Closed	8-9 Closed (OK)	8-10 Closed	
Mains Input Vac	ON	led off		■ - led off		
mains input vac	OFF		■ - led On (1)	■ - led off		
The battery in BackUP it is less than	YES		■ - led On		■ - led On (2)	
30% cap?	NO		■ - led On	led off		
Battery or system	YES	led off			■ - led On	
Fault?	NO	■ - led off		■ - led off		

(1) Contact relay Mains/Back switch at least 5 seconds after disconnection of Power

No. 6, 7 and 8 Display Signals

No.6: Led MAINS OR BACKUP: Input Mains On/Off No.7: Led LOW BATTERY (capacity less than 30%), BATTERY REPLACEMENT, FAULT BATTERY or FAULT

No.8: Led DIAGNOSIS: Battery charge mode.

ed Diagnosis. D tate of Charge	agnosis of the system through "blinking code" signal Light	
Monitoring Control	State	Led DIAGNOSIS (No.8)

			(140.7)
	Float	1 Blink/2 sec	OFF
Charging	Absorption	1 Blink/sec	OFF
Type	Boost	2 Blink/sec	OFF
	Recovery	5 Blink/sec	OFF
ault Battery /	Fault System		
	Reverse polarity or high battery Voltage (over 32.5Vdc for CBI 24xxA)	1 Blink/pause J	ON
	Battery No connected	2 Blink/pause JII	ON
	Element in Short Circuit	3 Blink/pause JJJL	ON
	Over Load or short circuit on the load	4 Blink/pause JJJJ	ON
	Bad battery; Internal impedance Bad or Bad battery wire connection	5 Blink/pause JIIIIL	ON
System	Life test not possible	6 Blink/pause JIIII	ON
Diagnosis	Boost condition; battery discharge after 4 min. of overload.	8 Blink/pause JIIIIL	ON
Diagnosis	Internal fault	9 Blink/pause JIIIIL	ON
	Low battery (under 18.5Vdc for CBI 24xxA) Only if started from battery, no Mains input, from Jumper №5 or Push Bottom	10 Blink/pause JUILL	ON
	MODBUS error	11 Blink/pause JULL	ON
	Life test not possible; Parallel mode on Slave Device	12 Blink/pause JULL_	ON
	Bad battery wire connection; Parallel mode on Slave Device	13 Blink/pause JULL	ON
	Boost condition; battery discharge after 4 min. of overload; Parallel mode on Slave Device	15 Blink/pause JULL	ON

No. 9. 12: Start From Battery Only; No Mains Vac

1.42: Start FrOID Battlery (Divit); FOR Managery (Divit); Edward (Divit); E

No. 10: Input AC Port pin. L - N:

1 Phase Switching Power Supplies L, N, PE .
Size 2 and Size 3 BRIDGE ONLY for input 115 Vac, and connect L, N, PE .

No. 11: Auxiliary Output "AUX 1"

Remove the window label to find the connector. It is possible to connect the Temperature sensor probe and apply it on the battery The function of the probe is for

temperature better compensation. With this it is possible to active the specifications of the ENS4 4 fire norm Size 1.2.3

Battery Temperature Compensation Charge (not for NiCd)
Connecting to Auxiliary Output AUX1 the cable RJTEMP (supplied separately), the CBI will vary the voltage of

pattery charging depending on the temperature:	
Fast Charge	Float charge
+/-5mV/°C x n. of Cells from -8°C to +45°C	+/-3mV/°C x n. of Cells from -20°C to +45°C
+140mV/Cell ÷ -200mV/Cell compared to the value	+120mV/Cell ÷ -120mV/Cell compared to the
at 20°C	value at 20°C

The device stop to charge the battery If the temperature is less than -20°C or greater than +45°C. The alarm fault sor placed on cable RJTEMP must be applied on the battery.

No. 13: Auxiliary Output "ALIX 2"

resent only in Sizes 3 and Sizes 4, connection MODBUS via RJ45 connector. See instruction MODBUS communications protocol. (CANBUS to be implemented No. 14: Auxiliary Output "AUX 3"

Present only in Sizes 4. The function is the same of Auxiliary Output "AUX 2"

No. 15: Buffering Time Setting (Size 3-4)

to 13. Building Time Setting (31253-4)

on models Size 3 and Size 4 is possible to set a buffering time. It can be selected by setting the desired value on the otary switch 13. Buffering time is initiated when the mains is switched OFF. The LOAD output will be ON for the

If the switch is in position 0, the LOAD output will be in ON state until the battery is completed discharged Any way to prevent dranger insist, the until disconnects the batteries when a minimum voltage level is reached. For units Size 1 or 2' you have to version with the extention CBUccoATBs. The LOAD output will be in ON state until the battery it is completed discharged. It is however possible to request factory outsomized versions with specific

No. 16: Bus Termination (Size 4)

Caution: Switch off the system before Setting the Jumper.

Read the MODBLIS/CANBLIS instruction manual to learn about the operational functions available. Setting always active during all states of the system.

No. 17: Select Output Voltage (Size4)

Output Voltage Selection	- 24 Vdc	12 Output Voltage
Output Voltage Selection	- 12 Vdc	24 Output Voltage

No. 18: Battery Management Configurations (Sizes 1.2.3.4)

No. 18: Stattery Management Configurations (Sizes 1,2,3,4)

*Freliminary Operations: One device for albatery types.

Completely automatic, all devices are suitable to chage and N-Cd. It is possible to change or add other charging curves.

They can charge one lead acid, seall clead acid, Gel and N-Cd. It is possible to change or add other charging curves connecting the device to a portable PC.

Caution: Switch of the system before Settling the jumper. Only jumper in position 6 is Retrested also with power ON.

Don't use Ni-Cd charging configuration in battery less than 7 Ah.

ttery Type Selection (Only for CBI485A and CBI485A/S)

Gel Battery

RATTERY

FAULT

ttony Tuno Coloction

Float charge ast charge (Size 2) Onen Lead المِماً وقوة 2 23 2.40 AGM Low 2 25 2 40 AGM High 2.40

2.30

2.40

battery Type Sele	CHOIL					
	Jumper Position (Size 1)	Jumper Position (Size 2)	Jumper Position (Size 3)	Dip Switch Position (Size 4)	Float charge (Volt/Cell)	Fast charge (Volt/Cell)
Open Lead	1999 asapsa	0000		T CONTROL OF THE PERSON OF THE	2.23	2.40
(AGM) Low	Too a canad	1234	19999 5050	1000400	2.25	2.40
Gel Battery	المحامية أوا		999 5454	1000	2.30	2.40
NiCd	المحامية والأدا	00 000	99 99 6966	Tappero B	1.4V/cell (12V:10 cells) (24V:20 cells) (48V:40 cells)	1.5V/cell (12V:10 cells) (24V:20 cells) (48V:40 cells)
Li-lon (4)	الأوق وقووه			1000400	3.45 (12V-4 cells) (24V-8 cells)	3.65 (12V-4 cells) (24V-5 cells)
Custom Charging Curve (5)			12 2 4 7 5 5 5		Config by D ADELView	PY351 or system.

Functional Setting					Function
Functional Settil	ng				Function
Battery Life test ON		1254 6	000 0 00000		Jumper present or dip sw ON: Life test enabled (not NiCd)
Fast Charge Enable (3)	1232 020	1234 6	12327 5	FAST CHARGE OFFICIN	Jumper present: Fast Cha enabled. It is possible ren Fast Charge enabling by RTCONN cable
"Start from Battery" (without Input Mains) (1)	0000 - 000	00000	00000 00000 00000 00000	BATTERY T	Switch ON the system wit the "Mains In Vac", only the battery is connected. For connection to external Pu button use RTCONN cable
UPS Enabling (2)	1000			FAST CHARGE.	Only for CBI243ATB1 CBI245ATB1 and CBI280 RTCONN cable for connection to external

Do not leave the jumper in position 5: otherwise in Backup mode, the battery discharges completely close to

For Size 2: must be require CBI2410A/S or CBI485A/S (/S means start with battery functions, otherwise only

For Size 2: must be require CBI2410A/S or CBI485A/S (/S ms start with input Mains) 2
CBI243ATB1 Replaces the fast charge in:
Contact closed: back-up (UPS) enabled.
It is enabled after 30 sec. Low Battery Detection
CDI263C1224A
CBI263C1224A

Contact closed: back-up (LIPS) enabled

Contact coase: loac-up (Ur-s) enabled
 Contact coage: Inhibit backup function. No UPS enabled.
 Jumper present in Fast Charge means also that every 288h, the device go in "Cycling Refresh Charging". This mode continue for 86 minutes at the same voltage continue (CAVICell; for Lead Acid Batteries.
 Please note that it is possible to use lithium-charging curve just with a single BMS. From the release:

- 13Vdo Output: C13 DC

o 24Vdc Output: S92 R3

• Size3 12Vdc, 24Vdc, 48Vdc Output: S40 R13

 Size4 Only by custom request

By DPY351 or ADELViewsystem it is possible configure a Customized Charging Curve. After programming it is possible disconnect the programmer an use the device as standalone device.

The Battery Care philosophy is based on algorithms that implement rapid and automatic charging, battery charge The battery Care philosophry is caused on arguments that imperient report and administration of control of the philosophry is caused on a grant in the diagnostic during intellation and operation. Elements in short circuit, accidental reverse polarity connection, disconnection of the battery, can easily be detected and removed by help of Blink Code of Diagnosis Led: during the installation and after sell. Each device is suited for all battery types t is possible setting predefined curves for Open Lead Acid. Sealed Lead Acid. Gel. Ni-Cd (option). They guarantees pattery reliability in time by continuously testing the internal impedance status, avoids any possible risk of damages and grants a permanent, reliable and safe connection of the battery to the power supply. The system, through a battery stimulation circuit with algorithms of evaluation of the detected parameter, is able to recognize sulphated batteries or batteries with a short-circuited element. Battery Test: Automatic. Every 60 sec. check battery connection. Every 220 minute in Float charge, make the test of the battery efficiency. The Battery Fault will be monitored by rela

Diagnostic Type Checks: Battery not connected:

Check for accidental disconnection of the battery cables: All In One detects accidental disconnection and immediately switched off the output power.

If the hattery is not connected no output nower Thest of quality wire connections:

During Float charge the quality (resistance) on the battery connection is checked every 60 sec. This to detect if the

Battery in Open Circuit or Sulphated:

ute. All In One tests of internal impedance, in Float charging mode Reverse Polarity check:

If the battery it is connected with inverted polarity, All In One is automatically protected. Test of battery voltage connections:

check, to prevent connection of wrong battery types, more or less than the nominal voltage.

End of Charge check

etely full, the device automatically switch in Float charging mode Check for Battery Cells in short circuit

Thanks to specific algorithms of evaluation, the CBs recognize batteries with cells in internal short circuit. In Float charge every 220 minute test of element in short circuit.

Diagnosis of battery and device All CBI devices support the user during installation and operation. A Blink code of Diagnosis Led allows to discriminate

iditions, "LED Battery Fault" ON and "LED Diagnosis" blinking with sequence; see Display Signal section.

Protection Features

On the primary side: the device is equipped whit an internally fuse. If the internal fuse is activated, it is most probable that there is a fault in the device. If happen, the device must be checked in the factory.

On the secondary side Battery and load: The device is electrically protected against short circuits and overload Inversion polarity: the module it is automatically protected against inversion of battery polarity and connection of

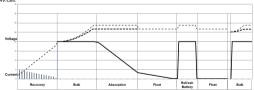
Over current and output short circuit: the unit limits the output current (see the technical data).

harge: not possible. The unit disconnects the battery when a minimum voltage level is reached Thermal behaviour

Internal oberaviour

Surrounding air temperature 50°C. For ambient temperature of over 50°C, the output current must be reduced by 2.5% per °C. Max 70°C. At the temperature of 70°C the output current will be 50% of in. The equipment does not switch off in case of ambient temperature above 70°C or thermal overload. The devices are protected for Over temperature conditions worst case; in this situations the device Strut-down the output and automatic restart when

multi-stage operation and real time diagnostic allows fast recharge and recovery of deep discharged Automatic multi-stage operation and real time diagnostic allows last recharge and recovery of deep discharged batteries, adding value and reliability to the system hosting the CBI device. The type of charging is Voltages stabilized and Current stabilized IUOLo. Five charging phases are identified by a flashing code on a Diagnosis LED. To maintain the Output Load in lower Voltage state, don't put jumper in position 6, in this case no boost charge but only Float charge. Fast/Dulk Charge means also that every 288h, the device go in "Cycling Refresh Charging" for 85 minutes at 2.4V/Cell.



Standard and Certifications

EN60950/III 60950-1 and CSA C22.2 No. 60950-1-07 (Information Technology Equipment) - Safety - Part1:

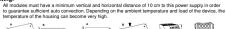
General Requirement. 33...

Device is intended to be installed in a cabinet protected from external shocks or damages.

IEC/EN 60335-2-29 Battery chargers Electrical safety EN54-4 Fire Detection and fire alarm systems:

DIN41773 (Charging cycle)

Devices, CBI243A, CBI245A, CBI123A, CBI126A, CBI1210A. EN60950 / UL60950-1 and CSA C22.2 No. 60950-1-07 (Information Technology Equipment) - Safety - Part1: General Requirement, Alla







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										•	www.adelsystem.com
DC Ups - All in ONE	12/24Vdc			12	Vdc		;	24Vdc		48	3Vdc
•		**************************************	0.24	TOTAL	WANTED THE PARTY OF THE PARTY O			VITAL POPULATION OF THE POPULA			and a second
Input (Volt)	115 – 230 – 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 / 230 – 277Vac	115 - 230 - 277Vac	115 – 230 – 277Vac	115 / 230 – 277Vac	115 / 230 – 277Vac	115 / 230 – 277Vac	115 / 230 – 277Vac
Output (Vdc – A – W)	12-24V /15-10A /280W	12Vdc - 3A - 36W	12Vdc - 6A - 72W	12Vdc - 10A - 120W	12Vdc - 35A - 420W	24Vdc - 3A - 72W	24Vdc - 5A - 120W	24Vdc - 10A - 240W	24Vdc - 20A - 500W	48Vdc - 5A - 240W	48Vdc - 10A - 500W
Reference	CBI2801224A	CBI123A	CBI126A	CBI1210A	CBI1235A	CBI243A	CBI245A	CBI2410A	CBI2420A	CBI485A	CBI4810A
INPUT DATA	445 000 0771/	445 000 0771/	445 000 0771/	445 000 0771/	445 / 000 //	445 000 0771/	445 000 0771/	445 (000)/	445 / 200)/	445 / 000 1/	145 /000 Ve-
Nominal Input Voltage Input Voltage Range	115 – 230 – 277Vac 90 – 135Vac	115 – 230 – 277Vac 90 – 305Vac	115 – 230 – 277Vac 90 – 305Vac	115 – 230 – 277Vac 90 – 305Vac	115 / 230 Vac 90 – 135Vac	115 – 230 – 277Vac 90 – 305Vac	115 – 230 – 277Vac 90 – 305Vac	115 / 230 Vac 90 – 135Vac	115 / 230 Vac 90 – 135Vac	115 / 230 Vac 90 – 135Vac	115 / 230 Vac 90 – 135Vac
Inrush Current (Vn and In Load) I ² t	180 – 305Vac ≤ 16 A ≤ 5msec	≤ 36 A ≤ 5msec	≤ 36 A ≤ 5msec	90 - 305 Vac ≤ 36 A ≤ 5msec	180 – 305Vac ≤ 80 A ≤ 5msec	90 – 305 Vac ≤ 36 A ≤ 5msec	≤ 36 A ≤ 5msec	180 – 305Vac ≤ 42 A ≤ 5msec	180 - 305Vac ≤ 80 A ≤ 5msec	180 – 305Vac ≤ 42 A ≤ 5msec	180 – 305Vac ≤ 35 A ≤ 5msec
Frequency	≤ 16 A ≤ 5ilisec 47 – 63 Hz	47 − 63 Hz	47 − 63 Hz	47 – 63 Hz	47 – 63 Hz	≤ 36 A ≤ 5insec 47 – 63 Hz	47 – 63 Hz	47 – 63 Hz	47 – 63 Hz	47 – 63 Hz	47 – 63 Hz
Input Current (115 – 230Vac)	5.5 –3A	2.8 – 1.3A	2.8 – 1.3A	2.8 – 1.3A	9.0 – 4.5A	2.8 – 1.3A	2.8 – 1.3A	5 – 2.5A	9.0 – 4.5A	5 – 2.5A	9.0 – 4.5A
Internal Fuse	6.3A	4A	4A	4A	10A	4A	4A	6.3A	10A	6.3A	10A
External Fuse (recommended) OUTPUT DATA	16A	10A	10A	10A	16A	10A	10A	16A	16A	16A	16A
Output Vdc /In	12Vdc 15A / 24Vdc 10A	12Vdc - 3A	12Vdc - 6A	12Vdc - 10A	12Vdc - 35A	24Vdc - 3A	24Vdc - 5A	24Vdc - 10A	24Vdc - 20A	48Vdc - 5A	48Vdc - 10A
Output Current (In)	15A / 10A	3A	6A	10A	35A	3A	5A	10A	20A	5A	10A
Dissipation Power load max (W)	28	15	18	25	68	18	25	48	68	48	68
Minimum load	No	No	No	No	No	No	No	No	No	No	No
Efficiency (50% of In) Short-circuit protection	> 91% Yes	≥ 89% Yes	≥ 89% Yes	≥ 89% Yes	> 90% Yes	≥ 89% Yes	≥ 89% Yes	≥ 83% Yes	> 90% Yes	≥ 83% Yes	> 90% Yes
Over Load protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Over Voltage Output protection	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 35Vdc)	Yes (Typ. 90Vdc)	Yes (Typ. 90Vdc)
Overheating Thermal Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reverse battery protection Sulfated battery check	Yes Yes by Deep Switch	Yes	Yes Ves by Jumper	Yes	Yes by Jumper	Yes	Yes Ves by Jumper	Yes Ves by Jumper	Yes Yes by Jumper	Yes by Jumper	Yes Ves by lumper
Sulfated battery check LOAD OUTPUT	res by Deep Switch	Yes by Jumper	Yes by Jumper	Yes by Jumper	Yes by Jumper	Yes by Jumper	Yes by Jumper	Yes by Jumper	res by sumper	Yes by Jumper	Yes by Jumper
Output voltage (at at IN) Vdc	10 – 14.4Vdc (15.5Vdc for Ni-Cd) 22 – 28.8Vdc (31Vdc for Ni-Cd)	10 - 14.4Vdc (15.5Vdc for Ni-	Cd) 10 - 14.4Vdc (15.5Vdc for Ni-Cd	10 - 14.4Vdc (15.5Vdc for Ni-	Cd) 10 - 14.4Vdc (15.5Vdc for Ni-Cd	22 – 28.8Vdc (31Vdc for Ni-Cd	1) 22 – 28.8Vdc (31Vdc for Ni-Co	i) 22 – 28.8Vdc (31Vdc for Ni-Cd)	22 - 28.8Vdc (31Vdc for Ni-Co	d) 44 – 57.6Vdc (62Vdc for Ni-Cd)	44 – 57.6Vdc (62Vdc for Ni-Cd)
Start up with strong load (capacitive load)	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited	Yes, Unlimited
Residual Ripple / Ripple Residuo	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp	≤ 60 mVpp
Nominal Current IN = Iload	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%	1.1 x In A ± 5%
Continuous current (without battery) Iload = In	15A 12Vdc / 10A 24Vdc	3A	6A	10A 20A	35A 70A	3A	5A 10A	10A 20A	20A 40A	5A	10A 20A
Max continuous current (with battery) Iload = In + Ibatt Max current Output Load: (Main Input) Iload (4sec.)	30A 12Vdc / 20A 24Vdc max. 45A 12Vdc / 30A 24Vdc	9A max	12A 18A max	30A max	105A max	9A max	10A 15A max	30A max	60A max	10A 15A max	30A max
Max current Output Load: (Back Up) Iload (4sec.)	max. 30A 12Vdc / 20A 24Vdc	6A max	12A max	20A max	70A max	6A max	10A max	20A max	40A max	10A max	20A max
Push Button or Remote Input Control (AMP type connector) Start from Battery without main	Yes	No (1)	No (1)	No (1)	Yes	No	No	No	Yes	No	Yes
Time Buffering; (switch off output without main input)	0.5;1;3;5;10;15; 20; 30; 45;60;∞	(2)	(2)	(2)	0.5;1;3;5;10;15; 20; 30; 45;60;∞	(2)	(2)	5 min standard - Require: SW S3	1 0.5;1;3;5;10;15; 20; 30; 45;60;	;∞ 5 min standard - Require: SW S3	1 0.5;1;3;5;10;15; 20; 30; 45;60;∞
Threshold alarm Battery almost flat	10 - 11 Vdc batt / 20 - 21 Vdc batt	10 - 11 Vdc batt	10 - 11 Vdc batt	10 - 11 Vdc batt	10 - 11 Vdc batt	20 - 21 Vdc batt	20 - 21 Vdc batt	20 - 21 Vdc batt	20 - 21 Vdc batt	40 - 42 Vdc batt	40 - 42 Vdc batt
Protections against total discharge	9 - 10 Vdc batt / 19 - 20 Vdc batt	9 - 10 Vdc batt	9 - 10 Vdc batt	9 - 10 Vdc batt	9 - 10 Vdc batt	19 - 20 Vdc batt	19 - 20 Vdc batt	19 - 20 Vdc batt	19 - 20 Vdc batt	38 - 40 Vdc batt	38 – 40 Vdc batt
BATTERY CHARGER OUTPUT											
	14 4Vda / 20 9Vda	14 4Vdo	14 4Vdo	14.4\/do	14.47/do	20 01/40	20.0740	20.01/40	20 07/40	E7 GV/do	E7 6\/do
Boost charge (Typ. at I _N)	14.4Vdc / 28.8Vdc Yes	14.4Vdc Yes	14.4Vdc Yes	14.4Vdc Yes	14.4Vdc Yes	28.8Vdc Yes	28.8Vdc Yes	28.8Vdc Yes	28.8Vdc Yes	57.6Vdc Yes	57.6Vdc Yes
	14.4Vdc / 28.8Vdc Yes 15h	14.4Vdc Yes 15h	14.4Vdc Yes 15h	14.4Vdc Yes 15h	14.4Vdc Yes 15h	28.8Vdc Yes 15h	28.8Vdc Yes 15h	28.8Vdc Yes 15h	28.8Vdc Yes 15h	57.6Vdc Yes 15h	57.6Vdc Yes 15h
Boost charge (Typ. at I _N) Short circuit Element Detection	14.4Vdc / 28.8Vdc Yes 15h 1min.		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N)	Yes 15h 1min. 13.8Vdc / 27,6Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 55Vdc	Yes 15h 1min. 55Vdc
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 – 10Vdc / 2 – 20Vdc	Yes 15h 1min. 13.75Vdc 2 – 9Vdc	Yes 15h 1min. 13.75Vdc 2 – 9Vdc	Yes 15h 1min. 13.75Vdc 2 – 9Vdc	Yes 15h 1min. 13.75Vdc 2 – 9Vdc	Yes 15h 1min. 27.5Vdc 2 – 16Vdc	Yes 15h 1min. 27.5Vdc 2 – 16Vdc	Yes 15h 1min. 27.5Vdc 2 – 16Vdc	Yes 15h 1min. 27.5Vdc 2 – 16Vdc	Yes 15h 1min. 55Vdc 2 – 24Vdc	Yes 15h 1 min. 55Vdc 2 – 24Vdc
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage	Yes 15h 1min. 13.8Vdc / 27,6Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 13.75Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 27.5Vdc	Yes 15h 1min. 55Vdc	Yes 15h 1min. 55Vdc
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 – 10Vdc / 2 – 20Vdc 3sec. Max	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1sec. Max	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1sec. Max	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1.5sec. Max	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1sec. Max	Yes 15h 1min. 55Vdc 2 – 24Vdc 1.5sec. Max	Yes 15h 1min. 55Vdc 2 – 24Vdc 1sec. Max
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{adj})	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / l _{bott}	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{batt}	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1 sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt}	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1.5sec. Max 0.3A	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1sec. Max 0.3A	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A	Yes 15h 1min. 55Vdc 2 – 24Vdc 1sec. Max 0.3A
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{bag}) Jumper Config.Type Battery (NiCd optional)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{batt}	Yes 15h 1nin. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt}	Yes 15h 1min. 13.75 Vdc 2 – 9 Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/ce	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} III Sealed Lead, 2.27 V/cell Sealec	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1 sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} J Lead, 2.3 V/cell gel; NiCd 1.51V	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1 sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt}	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt}	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt}
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{baq}) Jumper Config.Type Battery (NiCd optional) Quiescent Current	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / l _{batt} ≤100mA	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{balt}	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ± 100 % / I _{ball}	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/cell	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{balt} Ill Sealed Lead, 2.27 V/cell Sealed	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / t _{batt} J Lead, 2.3 V/cell gel; NiCd 1.51V s100mA	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt}	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 55Vdc 2 − 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / l _{batt}
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{batt}	Yes 15h 1nin. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt}	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} III Sealed Lead, 2.27 V/cell Sealed ≤100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} 1 Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1 sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt}	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt}	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt}
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sq}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / l _{batt} ≤100mA	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{balt}	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ± 100 % / I _{ball}	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{balt} Ill Sealed Lead, 2.27 V/cell Sealed	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} 1 Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt}	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 55Vdc 2 − 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / l _{batt}
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / l _{batt} ≤100mA	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{balt}	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ± 100 % / I _{ball}	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} III Sealed Lead, 2.27 V/cell Sealed ≤100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} 1 Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt}	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / l _{batt}	Yes 15h 1min. 55Vdc 2 − 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt}
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{balt} Charging current Limiting I _N (I _{ball}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / l _{batt} ≤100mA	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{batt} \$100mA Bulk / Trickle	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} III Sealed Lead, 2.27 V/cell Sealed ≤100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} 1 tead, 2.3 Vicell gel; NiCd 1.51V ≤100mA Bulk / Trickle co a 3 Stadi	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} \$100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{butt} ≤100mA Bulk / Trickle	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sal}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SiGNAL OUTPUT (RELAY) Main or Backup Power Low Battery	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 − 10Vdc / 2 − 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{ball} ≤100mA Bulk / Trickle	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100Vd, Aut Yes	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{balt} II Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle contait, 3 stage / IUoUo, Automatic	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / t _{batt} 1 Lead, 2.3 V/cell gel; NiCd 1.51V 5100mA Bulk / Trickle co a 3 Stadi	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt} \$100mA Bulk / Trickle	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / 1 _{batt} \$100mA Bulk / Trickle
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{saq}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILLARY OUTPUT	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$\frac{1}{2}\$ Sulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle IUoUo, Aut	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} II Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle pomatic, 3 stage / IUoUo, Automatic Yes Yes Yes	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{butt} 51 Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle co a 3 Stadi Yes Yes	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1 sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{bust} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 55Vdc 2 − 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{ad)}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10Å ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100MA Bulk / Trickle IUoUo, Aut Yes Yes Yes	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} II Sealed Lead, 2.27 V/cell Sealed st00mA Bulk / Trickle omatic, 3 stage / IUoUo, Automatic Yes Yes Yes No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{butt} J sed, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle co a 3 Stadi Yes Yes No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1sec. Max 0.3A 10∆ ±5% 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{saq}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILLARY OUTPUT	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$\frac{1}{2}\$ Sulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle IUoUo, Aut	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} II Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle pomatic, 3 stage / IUoUo, Automatic Yes Yes Yes	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{butt} 51 Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle co a 3 Stadi Yes Yes	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1 sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{bust} ≤100mA Bulk / Trickle Yes Yes	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle	Yes 15h 1min. 55Vdc 2 − 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10Å ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} II Sealed Lead, 2.27 V/cell Sealed st00mA Bulk / Trickle omatic, 3 stage / IUoUo, Automatic Yes Yes Yes No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{butt} J sed, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle co a 3 Stadi Yes Yes No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 * 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Ves RJ45	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{bat} \$100mA Bulk / Trickle Yes Yes Yes No No Yes RJ45
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 ÷ 100 % / I _{but} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Wes Hobbus ModBus	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes Yes Yes Mo Yes RJ45 Yes ModBus	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} III Sealed Lead, 2.27 V/cell Sealed ≤100mA Bulk / Trickle omatic, 3 stage / IUoUo, Automatic Yes Yes Yes Yes No No No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} 1 Lead, 2.3 V/cell gel; NiCd 1.51V 510mA Bulk / Trickle co a 3 Stadi Yes Yes Yes Yes No No No	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / l _{butt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Mo ModBus	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 55Vdc 2 − 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes ModBus
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{ad)}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10Å ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 34 ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 6A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/cell \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes Yes No Yes RJ45 Yes ModBus	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{built} II Sealed Lead, 2.27 V/cell Sealed st00mA Bulk / Trickle pmatic, 3 stage / IUoUo, Automatic Yes Yes Yes No Yes RJ45 No No No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} J tead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle co a 3 Stadi Yes Yes Yes No No No No -25 + +70°C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No No -25 + +70°C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Mo Wes RJ45 Yes ModBus	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No No	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes No Yes RJ45 Yes ModBus
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 ÷ 100 % / I _{but} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Wes Hobbus ModBus	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes Yes Yes Mo Yes RJ45 Yes ModBus	Yes 15h 1min. 27.5Vdc 2 − 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} III Sealed Lead, 2.27 V/cell Sealed ≤100mA Bulk / Trickle omatic, 3 stage / IUoUo, Automatic Yes Yes Yes Yes No No No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} 1 Lead, 2.3 V/cell gel; NiCd 1.51V 510mA Bulk / Trickle co a 3 Stadi Yes Yes Yes Yes No No No	Yes 15h 1min. 27.5Vdc 2 – 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / l _{butt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Mo ModBus	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No	Yes 15h 1min. 55Vdc 2 − 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes ModBus
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sog}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T² > (In) / De rating T² > (In)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 − 10Vdc / 2 − 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} 1100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(in) / °C	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No No -25 * +70°C > 50° -2.5%(ln) / °C	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 ÷ +70°C > 50° -2.5%(ln) / °C	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100MA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(ln) / °C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A 25% 20 + 100 % / l _{batt} IS ealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle brantic, 3 stage / IUoUo, Automatic Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(in) / °C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} ylead, 2.3 V/cell gel; NiCd 1.51V ±100mA Bulk / Trickle to a 3 Stadi Yes Yes Yes Yes No Ves RJ45 No No No -25 ÷ +70°C > 50° -2.5%(ln) / °C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{bat} \$100mA Bulk / Trickle Yes Yes Yes Yes No Ves RJ45 No No No -25 ÷ +70°C > 50° -2.5%(ln) / °C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 * 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes ModBus -25 * +70°C > 50° -2.5%(In) / °C	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(ln) / °C	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec: Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{bat} \$100mA Bulk / Trickle Yes Yes Yes Yes ModBus -25 + 70°C > 50° -2.5%(In) / °C
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{sag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature Operation De rating T² > (In) / De rating T² > (In) Ambient Temperature Storage Humidity at 25 °C Cooling	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{balt} 5100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{ball} 1100mA Bulk / Trickle Yes Yes Yes No No No No -25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No Yes RJ45 No No 25 ÷ +70°C > 50° -2.5%(ln) / °C -40 ÷ +85°C	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No -25 ÷ +70°C > 50° -2.5%((n) / °C -40 ÷ +85°C	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100MA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} III Sealed Lead, 2.27 V/cell Sealed \$\frac{1}{2}\$ 100 MA Bulk / Trickle bomatic, 3 stage / IUoUo, Automatic Yes Yes Yes Yes No No Yes RJ45 No No -25 + +70 °C > 50 ° -2.5%(in) / °C -40 + +85 °C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / t _{batt} 1Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle co a 3 Stadi Yes Yes Yes Yes No No Yes RJ45 No No 1.25 + 770°C 2.5%(In) / °C 40 + +85°C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No Yes RJ45 No No 25 ÷ +70°C > 50° -2.5%(ln) / °C 40 ÷ +85°C	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes WodBus 10 - 25 + 70°C 2 50° -2.5%(In) / °C 3 - 40 + +85°C	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / l _{batt} 5100mA Bulk / Trickle Yes Yes Yes No No Yes RJ45 No No -25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / 1 _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes No Yes RJ45 Yes ModBus -25 ÷ +70°C >50° -2.5%(ln) / °C -40 ÷ +85°C
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current (Bulk charge) Charging current Limiting I _N (I _{ad)}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10Å ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 33 ± 5% 20 + 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No -25 + +70°C -50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 6A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No -25 ++70°C > 50° -2.5%(n) / °C -40 ++85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cel Open Lead, 2.25 V/ce \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} II Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle pomatic, 3 stage / IUoUo, Automatic Yes Yes Yes No Yes RJ45 No No -25 ÷ +70°C > 50° -2.5%(n) / °C -40 * +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} 1 sed, 2.3 V/cell gel; NiCd 1.51V \$\frac{1}{2}\$ shows \$\frac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Ves No No No -25 + +70°C > 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes ModBus -25 + +70*C > 50* -2.5%(In) / *C -40 + +85*°C 95% to 25*°C Auto Convection	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No -25 + +70°C 50° -2.5%(ln) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes ModBus -25 + +70°C > 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging max I _{batt} Charging current Limiting I _N (I _{sol}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage (IN / OUT)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 − 10Vdc / 2 − 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes No No No No -25 + +70°C >50° -2.5%(ln) / °C 40 ÷ +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A 25% 20 + 100 % / l _{batt} II Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle brantic, 3 stage / IUoUo, Automatic Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} yead, 2,3 V/cell gel; NiCd 1.51V ±100mA Bulk / Trickle to a 3 Stadi Yes Yes Yes Yes No No No -25 ÷ +70°C > 50° -2.5%(In) / °C 40 ÷ +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{bat} \$100mA Bulk / Trickle Yes Yes Yes Yes No Ves RJ45 No No No -25 ÷ +70°C > 50° -2.5%(In) / °C 40 ÷ +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 * 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Ves RJ45 Yes ModBus -25 * +70°C > 50° -2.5%(In) / °C 40 * +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec: Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{bat} \$100mA Bulk / Trickle Yes Yes Yes Yes MoBus No Yes RJ45 Yes ModBus -25 + +70°C >50° -2.5%(In) / °C -40 ÷ +85°C 95% to 25°C Auto Convection
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current (Bulk charge) Charging current Limiting I _N (I _{ad)}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10Å ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 33 ± 5% 20 + 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No -25 + +70°C -50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 6A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No -25 ++70°C > 50° -2.5%(n) / °C -40 ++85°C 95% to 25°C Auto Convection	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cel Open Lead, 2.25 V/ce \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} II Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle pomatic, 3 stage / IUoUo, Automatic Yes Yes Yes No Yes RJ45 No No -25 ÷ +70°C > 50° -2.5%(n) / °C -40 * +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} 1 sed, 2.3 V/cell gel; NiCd 1.51V \$\frac{1}{2}\$ shows \$\frac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Ves No No No -25 + +70°C > 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes ModBus -25 + +70*C > 50* -2.5%(In) / *C -40 + +85*°C 95% to 25*°C Auto Convection	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No -25 + +70°C 50° -2.5%(ln) / °C -40 + 85°C 95% to 25°C Auto Convection	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes Wo ModBus -25 + +70°C 50° -2.5%(In) / °C -40 + 85°C 95% to 25°C Auto Convection
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{balt} Charging current Limiting I _N (I _{bag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T* > (In) / De rating T* > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage(IN / PE)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{batt} 1100mA Bulk / Trickle Yes Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No Ves RJ45 No No 25 ÷ +70°C >50° -2.5%(In) / °C 40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(n) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 * 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100MA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus No Yes RJ45 Yes ModBus 100 * 25° C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{ball} III Sealed Lead, 2.27 V/cell Sealed \$\frac{1}{2}\$ 100 mA Bulk / Trickle broatic, 3 stage / IUoUo, Automatic Yes Yes Yes Yes No No No 1-25 * +70°C > 50° -2.5%(ln) / °C -40 * +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / t _{batt} 1 Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle to a 3 Stadi Yes Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(In) / °C 40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No No -25 ÷ +70°C > 50° -2.5%(in) / °C -40 ÷ +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 * 100 % / I _{ball} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 Yes ModBus 25 * +70°C > 50° -2.5%(In) / °C -40 * +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} 5100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No 1.25 ÷ +70°C > 50° - 2.5%(ln) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / l _{bat} 5100mA Bulk / Trickle Yes Yes Yes Yes And ModBus No Yes RJ45 Yes ModBus Auto Convection 3000Vac 1605Vac
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current (Bulk charge) Charging current Limiting I _N (I _{aq}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage (IN / OUT) Isolation Voltage (IN / PE) Isolation Voltage (IN / PE) Isolation Voltage (IN / PE) Protection Class (ENIEC 60529) Reliability (MTBF IEC 61709)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 ÷ 100 % / l _{balt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No 1-25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No -25 ÷ +70°C > 50° -2.5%(In) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No 1-25 ÷ +70°C > 50° -2.5%(In) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac	Yes 15h 1min. 13.75Vdc 2 – 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$\frac{\text{stound}}{\text{stound}}\$ IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 ÷ +70°C > 50° 2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle bomatic, 3 stage / IUoUo, Automatic Yes Yes Yes Yes No No Yes RJ45 No No -25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{butt} 51 Lead, 2.3 V/cell gel; NiCd 1.51V 5100mA Bulk / Trickile co a 3 Stadi Yes Yes Yes Yes No No No 25 + +70°C > 50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No Yes RJ45 No No -25 ÷ +70°C > 50° -2.5%(ln) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac \$500Vac	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 * 100 % / I _{ball} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes No Yes RJ45 Yes ModBus -25 * +70°C > 50° -2.5%(In) / °C -40 * +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No -25 ÷ +70°C > 50° -2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec: Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt} 5100mA Bulk / Trickle Yes Yes Yes Yes Yes No Yes RJ45 Yes ModBus 25 ÷ +70°C > 50° -2.5%(In) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current (Bulk charge) Charging current Limiting I _N (I _{ad)}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage (IN / OUT) Isolation Voltage (IN / DE) Isolation Voltage (IN / PE) Isolation Voltage (IN / PE) Protection Class (ENIEC 60529) Reliability (MTBF IEC 61709) Pollution Degree Environment	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 − 10Vdc / 2 − 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 34 ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No -25 + +70°C > 50° -2.5%([n] / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 6A ± 5% 20 + 100 % / I _{batt} \$100mA Bulk / Trickle \$100mA Bulk / Trickle Yes Yes Yes Yes No No -25 + +70°C > 50° - 2.5%(In) / °C 40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No No -25 ++70°C -50° -2.5%(In) / °C -40 ++85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{bust} III Sealed Lead, 2.27 V/cell Sealed strong	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} 1 sed, 2.3 V/cell gel; NiCd 1.51V s100mA Bulk / Trickle co a 3 Stadi Yes Yes Yes No No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(In) / °C 40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{butt} ≤100mA Bulk / Trickle Yes Yes Yes Yes ModBus -25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No 25 + +70°C > 50° - 2.5%(ln) / °C -40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I hatt ≤100mA Bulk / Trickle Yes Yes Yes Yes Wodbus No Yes RJ45 Yes ModBus -25 + +70°C 50° -2.5%(In) / °C 40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current (Eulk charge) Charging current Limiting I _N (I _{ad)}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage (IN / OUT) Isolation Voltage (IN / PE) Isolation Voltage (IN / PE) Protection Class (ENIEC 60529) Reliability (MTBF IEC 61709) Pollution Degree Environment Connection Terminal Blocks Screw Type	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 ÷ 100 % / I _{but} 5100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{ball} 1100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac IP 20 > 300 000 h 2	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes No No No -25 ÷ +70°C -40 ÷ +85°C -95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Aus No No No 3000Vac 1100Vac 1100Vac 1100Vac 1100Vac 1100Vac 1100Vac 1100Vac	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 ÷ 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/cell ≤100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes Yes ModBus -25 + +70°C >50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac IF 20	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / I _{bull} 8ll Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle bmatic, 3 stage / IUoUo, Automatic Yes Yes Yes No No Yes RJ45 No No No -25 + +70°C -50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / I _{butt} 51 Lead, 2.3 V/cell gel; NiCd 1.51V 5100mA Bulk / Trickle co a 3 Stadi Yes Yes Yes Yes Yes Auto Convection 3000Vac 1605Vac 500Vac 1P 20	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No No -25 ÷ +70°C -50° -2.5%(ln) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{ball} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes ModBus -25 ÷ +70°C -50° -2.5%(In) / °C 40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20	Yes 15h 1min. 55Vdc 2 − 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No -25 ÷ +70°C >50° -2.5%(ln) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{balt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 Yes ModBus -25 ÷ +70°C -50° -2.5%(In) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current (Eulk charge) Charging current Limiting I _N (I _{sog}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage (IN / OUT) Isolation Voltage (IN / PE) Isolation Voltage (IN / PE) Protection Class (ENIEC 60529) Reliability (MTBF IEC 61709) Pollution Degree Environment Connection Terminal Blocks Screw Type	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 − 10Vdc / 2 − 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10A ± 5% 24Vdc 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No No No -25 + +70°C > 50° -2.5%(ln) / °C 40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1805Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 4mm (30-10 AWG) I	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{batt} II Sealed Lead, 2.27 V/cell Sealed Sealed Lead, 2.	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} yead, 2.3 V/cell gel; NiCd 1.51V ±100mA Bulk / Trickle to a 3 Stadi Yes Yes Yes Yes No No No -25 ÷ +70°C > 50° -2.5%(In) / °C 40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) II	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{bat} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2.5mm (24-14 AWG) I	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 Yes ModBus -25 + 70°C > 50° -2.5%(In) / °C 40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 4mm (30-10 AWG) I	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° - 2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{ball} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Auto Convection 3000Vac 1605Vac 500Vac 1P 20 > 300 000 h 2 4mm (30-10 AWG) I sec. Max I had to the sec. Max I had the sec.
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current (Eulk charge) Charging current Limiting I _N (I _{ad)}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T³ > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage (IN / OUT) Isolation Voltage (IN / PE) Isolation Voltage (IN / PE) Protection Class (ENIEC 60529) Reliability (MTBF IEC 61709) Pollution Degree Environment Connection Terminal Blocks Screw Type	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 - 10Vdc / 2 - 20Vdc 3sec. Max 6% of charging current limiting 15A ± 5% 12Vdc / 10A ± 5% 24Vdc 10 + 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{batt} 1100mA Bulk / Trickle Yes Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac 1P 20 > 300 000 h 2 2,5mm (24-14 AWG) I 65x115x135 mm	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No Yes RJ45 No No No 25 ÷ +70°C > 50° -2.5%(In) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I 65x115x135 mm	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{ball} ≤100mA Bulk / Trickle Yes Yes Yes Yes No No No 1-25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac 1F 20 > 300 000 h 2 2,5mm (24-14 AWG) I 65x115x135 mm	Yes 15h 1min. 13.75Vdc 2 = 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / l _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100MA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus No Yes RJ45 Yes ModBus 1-25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1805Vac 500Vac IP 20 > 300 000 h 2 4mm (30-10 AWG) I 150x115x135 mm	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{balt} III Sealed Lead, 2.27 V/cell Sealed \$100mA Bulk / Trickle contaic, 3 stage / IUoUo, Automatic Yes Yes Yes Yes No No No 1-25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I 65x115x135 mm	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{butt} 1Lead, 2.3 V/cell gel; NiCd 1.51V \$100mA Bulk / Trickle co a 3 Stadi Yes Yes Yes Yes No No No -25 + +70°C > 50° -2.5%(In) / °C 40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I 65x115x135 mm	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No Yes RJ45 No No -25 ÷ +70°C > 50° -2.5%(in) / °C -40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I 100x115x135 mm	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 * 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 Yes ModBus \$25 * +70°C > 50° -2.5%(In) / °C -40 * +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 4mm (30-10 AWG) I 150x115x135 mm	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} 5100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No -25 + +70°C > 50° -2.5%(In) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I 100x115x135 mm	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Aus ModBus 1.25 ÷ +70°C 2.5%(In) / °C 4.40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 300 000 h 2 4mm (30-10 AWG) I 150x115x135 mm
Boost charge (Typ. at I _N) Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I _N) Min.Time Boost–Bulk charge (Typ. at I _N) Float charge (Typ. at I _N) Recovery Charge Turn-On delay after applying mains voltage End of charging current (Bulk charge) Charging max I _{batt} Charging current Limiting I _N (I _{bag}) Jumper Config.Type Battery (NiCd optional) Quiescent Current Remote Input Control (AMP Type connector) Charging Curve SIGNAL OUTPUT (RELAY) Main or Backup Power Low Battery Fault Battery AUXILIARY OUTPUT UPS Enabling Temp. Charging probe Parallel connection Communication Protocol CLIMATIC DATA Ambient Temperature operation De rating T³ > (In) / De rating T² > (In) Ambient Temperature Storage Humidity at 25 °C Cooling GENERAL DATA Isolation Voltage (IN / OUT) Isolation Voltage (IN / PE) Reliability (MTBF IEC 61709) Pollution Degree Environment Connection Terminal Blocks Screw Type Protection class (with PE connected) Dimension (w-h-d)	Yes 15h 1min. 13.8Vdc / 27,6Vdc 2 − 10Vdc / 2 − 20Vdc 3sec. Max 6% of charging current limiting 15Å ± 5% 12Vdc / 10A ± 5% 24Vdc 10 ÷ 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes Yes Yes Yes Yes Yes Y	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 3A ± 5% 20 ÷ 100 % / l _{batt} ≤100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec: Max 0.3A 6A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No No No No No -25 + +70°C > 50° -2.5%(ln) / °C 40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 13.75Vdc 2 - 9Vdc 1sec. Max 0.3A 10A ± 5% 20 + 100 % / I _{batt} ≤100mA Bulk / Trickle Yes Yes Yes No No No No -25 + +70°C > 50° -2.5%(in) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1805Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 13.75Vdc 2 − 9Vdc 1sec. Max 0.3A 35A ± 5% 10 + 100 % / I _{batt} 2.23 V/cell Open Lead, 2.25 V/ce \$100mA Bulk / Trickle IUoUo, Aut Yes Yes Yes No Yes RJ45 Yes ModBus -25 + +70°C > 50° -2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 4mm (30-10 AWG) I	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 3A ± 5% 20 + 100 % / l _{batt} II Sealed Lead, 2.27 V/cell Sealed Sealed Lead, 2.	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 5A ± 5% 20 + 100 % / l _{batt} yead, 2,3 V/cell gel; NiCd 1.51V ±100mA Bulk / Trickle to a 3 Stadi Yes Yes Yes Yes No No No -25 ÷ +70°C > 50° -2.5%(In) / °C 40 ÷ +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) II	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1.5sec. Max 0.3A 10A ± 5% 20 ÷ 100 % / l _{bat} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2.5mm (24-14 AWG) I	Yes 15h 1min. 27.5Vdc 2 - 16Vdc 1sec. Max 0.3A 10A ± 5% 10 + 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes No Yes RJ45 Yes ModBus -25 + 70°C > 50° -2.5%(In) / °C 40 + 85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 4mm (30-10 AWG) I	Yes 15h 1min. 55Vdc 2 - 24Vdc 1.5sec. Max 0.3A 5A ± 5% 20 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes No Yes RJ45 No No No -25 + +70°C > 50° - 2.5%(ln) / °C -40 + +85°C 95% to 25°C Auto Convection 3000Vac 1605Vac 500Vac IP 20 > 300 000 h 2 2,5mm (24-14 AWG) I	Yes 15h 1min. 55Vdc 2 - 24Vdc 1sec. Max 0.3A 10A ± 5% 10 ÷ 100 % / I _{batt} \$100mA Bulk / Trickle Yes Yes Yes Yes Yes Auto Convection 3000Vac 1605Vac 500Vac 1P 20 > 300 000 h 2 4mm (30-10 AWG)

^{(1) -} Options to be defined by Order/S (ex: CBIXXXA/S), Push Button not available (2) - Yes if required by order /TB1/TB2/TB3..